PRIORITY CURRENT RELAYS

- The relays monitor the strength of current in the circuit and close contact 1, 2 at a jump exceeding of a guaranteed switched current
- They make it possible to interrupt the power supply of one (non-priority) circuit, if the current of the other (priority) circuit jumps to a set value
- They are most frequently installed in distribution systems where concurrent operation of more appliances is not possible because of risk of exceeding a permitted power input
- For example, the relays can disconnect electric heating, a storage block heater from the network if an instantaneous water heater is switched - therefore it is possible to select a main circuit breaker and conductors for a lower power input
- They make it possible to increase the number of appliances for existing installations
- In the circuits with electronic (e.g. thyristor) control, they cannot be used directly but with a time-delay relay - see connection examples
- Maximum current through the current coil: 63 A
- Maximum current through the contact: 16 A

Priority current relays

Contact sequence [1]	Operating current I_n [A]	Type	Product code	Weight [kg]	Packing [pcs]
10	5 ÷ 15	**RP1-10/5-15**	07420	0.1	10
	10 ÷ 28	**RP1-10/10-28**	07421	0.1	10
	26 ÷ 63	**RP1-10/26-63**	07422	0.1	10
01	5 ÷ 15	**RP1-01/5-15**	07417	0.1	10
	10 ÷ 28	**RP1-01/10-28**	07418	0.1	10
	26 ÷ 63	**RP1-01/26-63**	07419	0.1	10

[1] Each digit indicates successively the number of make and break contacts

Specification

Type			**RP1**
Approval marks			
Contact 1,2			
Sequence [1]			10, 01
Rated voltage/current	AC-1	U_n/I_n	250 V a.c. / 16 A
Electrical endurance			75 000 operating cycles
Frequency of switching			max. 1200 operating cycles/h
Connection - terminals 1,2			0.75 ÷ 2.5 mm²
Current coil A1, A2			
Operating current range		I_n	5 ÷ 15 A, 10 ÷ 28 A, 26 ÷ 63 A
Guaranteed switched current for I_n [2]	range 5 ÷ 15		≥ 5 A
	range 10 ÷ 28		≥ 10 A
	range 26 ÷ 63		≥ 26 A
Guaranteed unswitched current for I_n	range 5 ÷ 15		≤ 2 A
	range 10 ÷ 28		≤ 6 A
	range 26 ÷ 63		≤ 16 A
Connection - terminals A1, A2			0.75 ÷ 16 mm²
Power losses			3 W
Other data			
Insulation voltage			400 V
Mounting on the rail DIN EN 50 022 -width			35 mm
Degree of protection			IP20
Ambient temperature			-20 ÷ 50 °C
Seismic immunity (8 ÷ 50 Hz)			3 g
Operating position			arbitrary

[1] Each digit indicates successively the number of make and break contacts

[2] Only for jump increase in current

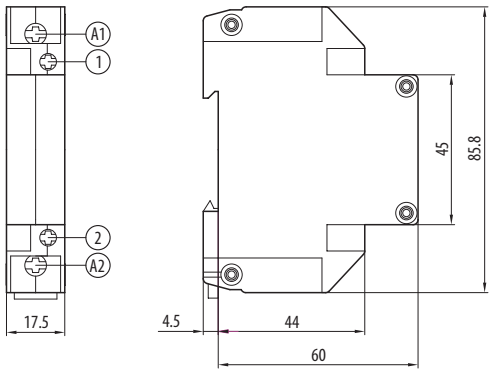
RP1 selection according to power output of the switched appliance

Appliance		**Relay RP1**
Voltage [V a.c.]	Power output [kW]	Current range I_n [A]
230	1.2 ÷ 3.4	5 ÷ 15
	2.3 ÷ 6.4	10 ÷ 28
	6 ÷ 14.5	26 ÷ 63
400	3.4 ÷ 10	5 ÷ 15
	6.9 ÷ 19.3	10 ÷ 28
	18 ÷ 43.5	26 ÷ 63

PRIORITY CURRENT RELAYS

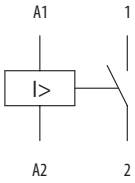
Dimensions

RP 1

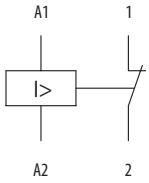


Diagram

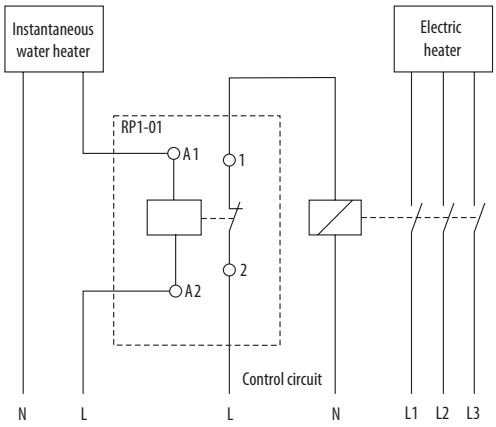
RP 1-10

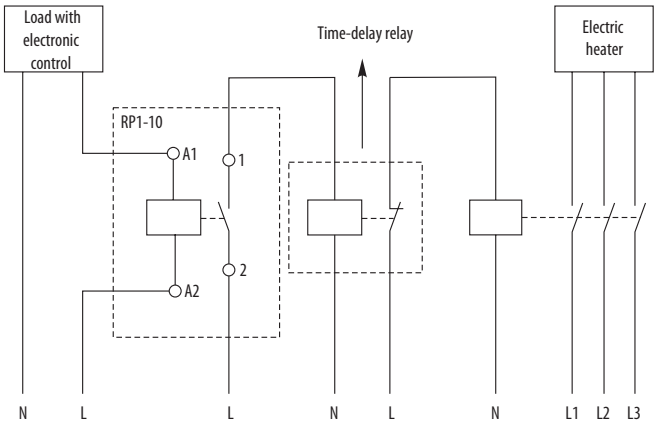


RP 1-01



Wiring diagram examples





- For example, at locking of consumption of an electric heater (a non-priority appliance) the current coil (terminals A1, A2) is connected in the circuit of an instantaneous water heater (a priority appliance) at switching the latter on, and control contact (terminals 1, 2) is connected in the circuit of the electric heater contactors. So if the instantaneous water heater is switched on and the current reaches so called "guaranteed switched current", the control break contact will interrupt the power supply of contactors, and subsequently disconnects the electric boiler.

- At priority switching of an appliance with electronic control the relay function is troubled (the relay is synchronized with the electronic control). For this reason it is recommended to connect a time-delay relay in the control contact circuit.